

# **Chapter 16 Quantification of Exposure: Development of the Emissions Inventory for the Multipathway Risk Assessment**

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## **16.1 Introduction**

Chapter 7 provides an overview of the process used to develop an emissions inventory for an air toxics risk assessment. As noted in that chapter:

- Emissions data are a source term for the risk assessment, primarily as a key input for computer models that estimate the transport of chemicals in the atmosphere; if and how they will be transformed by chemical or physical processes; how and where they will be deposited; and how they will continue to partition and move through environmental media following deposition.
- Developing the emissions inventory involves identifying the specific air toxics released from the source and quantifying release characteristics (e.g., release rates, temperature, release velocity).
- Local enhancements of existing air toxics emissions inventories may be advantageous to a particular air toxics assessment effort as a very critical initial step, because air toxics inventories are not always at the quality that would provide the results desired in a modeling assessment.

## **16.2 Developing the Emissions Inventory**

The process used to develop the emissions inventory for the multipathway risk assessment is similar to the process for inhalation analyses (see Chapter 7 for a description of this process). However, there are a few additional considerations that may apply to a given multipathway analysis (e.g., information on particulate/particle-bound/vapor fractions if ISCST3 is used). See Chapter 18 for more discussion on inputs for models used in multimedia assessment.